

VMware vSphere: Install, Configure, Manage

Duration: 5 days

Audience: Professionnel TI

Who is this training for?

System Administrators and Engineers

Training objectives

- Install and configure ESXi hosts
- Deploy and configure vCenter
- Use the vSphere client to create vCenter inventory and assign roles
- Create virtual networks using standard and distributed vSphere switches
- Create and configure datastores using supported storage technologies
- Use the vSphere client to create virtual machines, Templates, clones, and snapshots
- Create content libraries to manage templates and deploy virtual machines
- Manage virtual machine resource allocation
- Migrate virtual machines with vSphere vMotion and vSphere Storage vMotion
- Create and configure a vSphere cluster with vSphere High Availability and vSphere Distributed Resource Scheduler
- Manage the vSphere lifecycle to maintain vCenter. ESXi hosts and up-to-date VMs

Summary

This course provides participants with the skills and knowledge necessary to install, configure, and manage VMware vSphere 8, which includes VMware ESXi 8 and VMware vCenter 8. The course prepares you to administer a vSphere infrastructure for an organization of any size. This training forms the foundation for most VMware technologies in the software-defined data center. It is aligned with VMware ESXi 8.0 and VMware vCenter 8.0 products.

Course outline

Introduction to vSphere and Virtualization

- Explain the basic concepts of virtualization
- Describe vSphere's place in the software-defined data center and cloud infrastructure
- Recognize the user interfaces for accessing vSphere
- Explain how vSphere interacts with CPUs, Memory, Networking, Storage, and GPUs

Installing and Configuring ESXi

- Installing an ESXi Host
- Recognizing ESXi User Account Best Practices
- Configuring ESXi Host Settings Using the DCUI and VMware Host Client

Deploying and Configuring vCenter

- Recognizing Communication Between ESXi and vCenter Hosts
- Deploying vCenter Server Appliance
- Configuring vCenter Settings
- Using the vSphere Client for Add and Manage License Keys
- Create and Organize vCenter Inventory Objects
- Recognize vCenter Permission Enforcement Rules
- View vCenter Logs and Events

vSphere Networking Configuration

- Configure and View Standard Switch Configurations
- Configure and View Distributed Switch Configurations
- Recognize the Difference Between Standard and Distributed Switches
- Explain How to set networking policies on standard and distributed switches

Configuring vSphere Storage

- Recognizing vSphere Storage Technologies
- Identifying Types of vSphere Datastores

- Describing Fibre Channel Components and Addressing
- Describing iSCSI Components and Addressing
- Configuring iSCSI Storage on ESXi
- Creating and Managing VMFS Datastores
- Configuring and Managing NFS Datastores

Deploying Virtual Machines

- Creating and Managing Provision virtual machines
- Explain the importance of VMware tools
- Identify the files that make up a VM
- Recognize the components of a VM
- Navigate the vSphere client and review VM settings and options
- Modify VMs by dynamically increasing resources
- Create VM templates and deploy VMs from them
- Clone VMs
- Create customization specifications for guest operating systems
- Create Local, published, and subscribed content libraries
- Deploy virtual machines from content libraries
- Manage multiple versions of virtual machine templates in content libraries

Managing virtual machines

- Recognize the types of virtual machine migrations
- Migrate virtual machines using vSphere vMotion
- Describe the role of Enhanced vMotion Compatibility in migrations
- Migrate virtual machines using vSphere Storage vMotion
- Take a snapshot of a VM
- Manage, consolidate, and delete snapshots
- Describe CPU and memory concepts in relation to a virtualized environment

- Describe how VMs compete for resources
- Define CPU and memory shares, reservations, and limits

Deploy and configure vSphere clusters

- Create a vSphere cluster that is enabled for vSphere DRS and vSphere HA
- View information about a vSphere cluster
- Explain How vSphere DRS determines VM placement on cluster hosts
- Recognize use cases for vSphere DRS settings
- Monitor a vSphere DRS cluster
- Describe how vSphere HA responds to different types of failures
- Identify options for configuring network redundancy in a vSphere HA cluster
- Recognize vSphere HA design considerations
- Recognize use cases for different vSphere HA settings
- Configure a vSphere HA cluster
- Know when to use vSphere fault tolerance

vSphere Lifecycle Management

- Enable vSphere Lifecycle Manager in a vSphere cluster
- Describe the features of the vCenter Update Scheduler
- Run vCenter upgrade pre-checks and interoperability reports
- Recognize vSphere Lifecycle Manager features
- Distinguish between managing hosts using baselines and managing hosts using Using Images
- Describe how to update hosts using baselines
- Describe ESXi images
- Validate ESXi hosts for compliance with a cluster image and update ESXi hosts
- Update ESXi hosts using vSphere Lifecycle Manager
- Describe vSphere Lifecycle Manager automatic recommendations
- Use vSphere Lifecycle Manager to update VMware tools and machine hardware virtual

Approach and methodology

Lectures - Demonstrations - Guided and individual exercises

Prerequisites

Have experience in system administration on Microsoft Windows or Linux operating systems or equivalent content

Recommendations

- Review: Virtualization Basics Data Center Architecture Principles
- Familiarize With: VMware Concepts (ESXi, vCenter Server)
- Identify Your Goals: Virtual Infrastructure Deployment Virtual Machine Management Centralized Administration

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